

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003688**Date Inspected:** 21-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

**OBG Sub-Assembly Bay 1****Deck Panel Production Welding**

ABF Representative Kit Man Li informed QA that ZPMC performed magnetic particle testing to the tack welds on Deck Panels DP-069-001 and marked 41 out of 180 tack welds for repair.

The Quality Assurance Inspector witnessed the welding of the production deck panel DP-069-001(5 rib). The welding of the deck panel was performed on gantry 1 to produce the partial joint penetration groove weld. Upon completion of the gas metal arc welding (GMAW) root pass ZPMC performed the subsequent submerged arc welding (SAW) pass. The parameters appeared to be within welding procedure specification for dual process WPS-B-T-2342-U1 (U-rib)-3.

The Quality Assurance Inspector observed ZPMC performing fit-up and tack welding operations to Deck Panel DP-006-002. It was observed that ZPMC tack welding technique has changed recently in an effort to minimize the cracks. ZPMC is pausing at the ends of the tacks and depositing an excessive amount of weld metal as illustrated in the digital photograph below.

The Quality Assurance Inspector performed Ultrasonic Testing (UT), prescreening, on completed Partial Joint

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Penetration (PJP) groove welds, tack weld areas only, on Deck Panel DP-049-001. The prescreening is in effort to determine the condition of said tack welds for compliance with project specifications. Numerous indications indicative of cracks were located and the data was forwarded to structural materials representative Peter Dautermann for future review.

### Summary of Conversations:

As stated in the contents of the above report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco(707) 552 7715, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Bertlesman,Greg	Quality Assurance Inspector
<b>Reviewed By:</b>	Lanz,Joe	QA Reviewer

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